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## A new species of the *Eleutherodactylus conspicillatus* group (Leptodactylidae) from Peru, with comments on its call

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**A new species of the *Eleutherodactylus conspicillatus* group is described from Cocha Cashu, 350 m, Manu National Park, Southeastern Peru. This species is most similar to *E. gutturalis* and *E. conspicillatus* and possesses a very conspicuous call that can be heard only at dusk. A key to the species of *Eleutherodactylus* of Cocha Cashu is presented.**

### INTRODUCTION

Only seven species of frogs of the *conspicillatus* group (sensu LYNCH, 1986) of the genus *Eleutherodactylus* are known to occur in Amazonian forests below 1000 m: *Eleutherodactylus conspicillatus* (Günther, 1859), *E. fenestratus* (Steindachner, 1864), *E. lanthanites* Lynch, 1975, *E. malkini* Lynch, 1980, *E. peruvianus* (Melin, 1941), *E. vilarsi* (Melin, 1941) and *E. zeuctotylus* Lynch & Hoogmoed, 1977 (LYNCH, 1980). All of them except *E. zeuctotylus* have been reported from Peru.

During an ecological study of the anuran community of Cocha Cashu Biological Station, in Manu National Park, Southeastern Peru (fig. 1), 81 species of frogs were found to be sympatric (RODRÍGUEZ, 1992). Among thirteen species of *Eleutherodactylus*, four belong to the *conspicillatus* group: *E. fenestratus*, distributed in Brazil, the Bolivian Chaco and Southeastern Peru; *E. peruvianus*, ranging from upper Amazonian localities between Southern Peru and Southern Colombia, from 200 m to as high as 1910 m (LYNCH &



DUELLMAN, 1980); and two unnamed species. One of these species was first discovered by its very distinctive call, heard only at dusk in the forest of Cocha Cashu. This species is described below. The other unnamed species will be described elsewhere (FLORES & RODRÍGUEZ, in preparation). Eight remaining species of *Eleutherodactylus* in the area belong to the *unistrigatus* group (sensu LYNCH, 1986): *E. altamazonicus* Barbour & Dunn, 1921, *E. cf. carvalhoi* (Lutz, 1952), *E. diadematus* (Jiménez de la Espada, 1875), *E. mendax* Duellman, 1978, *E. ockendeni* (Boulenger, 1912), *E. ventrimarmoratus* (Boulenger, 1912), *E. toftae* Duellman, 1978 and an undetermined green frog. The thirteen species, known only from a juvenile, was tentatively reported before as a Ceratophryinae (RODRÍGUEZ & CADLE, 1990; RODRÍGUEZ, 1992) but is here recognized as *E. sulcatus* (Cope, 1874) (LYNCH, personal communication).

In this paper I describe a new species of frog of the *Eleutherodactylus conspicillatus* group. I also present calls and some ecological notes contrasting the new species with syntopic species of the group in Cocha Cashu, Manu National Park.

#### MATERIALS AND METHODS

I examined specimens of the species of the *Eleutherodactylus conspicillatus* group occurring in Amazonian Peru. Measurements used in the description were taken as in LYNCH & DUELLMAN (1980), except for head length that was taken from the tip of snout to the angle of jaw, using dial calipers with a precision to the nearest tenth of millimeter.

Calls were recorded with a Panasonic tape recorder and analyzed on a Digital Sona-Graph 7800 Kay Elemetrics and 7900 printer and Uniscan Multigon Inc.

I monitored daily cycles of calling activity of the four species of the *Eleutherodactylus conspicillatus* group, by censusing advertisement calls through 219 audio strip transects. Censuses consisted in walking different trails in Cocha Cashu area, at 06.00, 12.00, 18.00 and 24.00 h, under rainy, sunny, cloudy or post rain weather conditions, during the onset (October) and in the middle (January to March) of the rainy season, between 1986 and 1989. I registered the number of calling males while walking trails at a speed of 1.5 km an hour; none of the censuses lasted more than 2 hours. A complete analysis of these data will be presented elsewhere. Specimens, ecological data and recordings were collected during 395 days of field work at Cocha Cashu, from September 1985 to November 1989.

Museum acronyms used are: KU, Museum of Natural History, The University of Kansas, Lawrence; MNHN, Muséum National d'Histoire Naturelle de Paris; MUSM (= MHNJP), Museo de Historia Natural (Javier Prado) de la Universidad Mayor de San Marcos, Lima; USNM, National Museum of Natural History, Smithsonian Institution, Washington D. C.

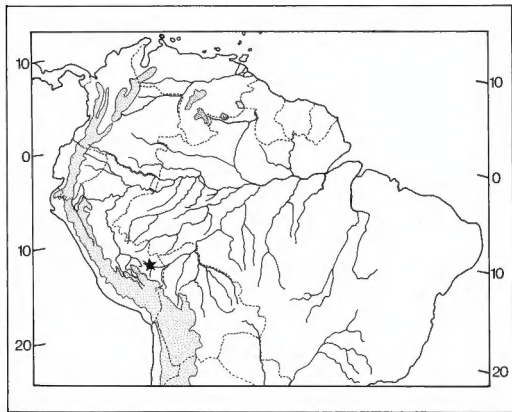


Fig. 1. — Map of South America showing location of Cocha Cashu (star), in the Manu National Park, Peru, type locality of *Eletherodactylus buccinator* sp. nov. The area above 3000 m is stippled.

## RESULTS

### *Eletherodactylus buccinator* sp. nov.

(fig. 2)

*Holotype*. — MUSM (=MHNJP) 3842, an adult male collected at Cocha Cashu Biological Station (11°55' S, 71°18' W), Manu National Park, Department of Madre de Dios, Peru, by Lily O. RODRÍGUEZ on October 29, 1985.

*Paratopotypes*. — Four adult males: MUSM 3845, collected on January 18, 1989; MNHN 1991.1302, on October 4, 1989; USNM 299779, on October 25, 1986; MNHN 1991.1301, on November 8, 1989. Three juveniles: MUSM 3847 and 3865, collected on January 13, 1987; MUSM 3846, on February 22, 1989.

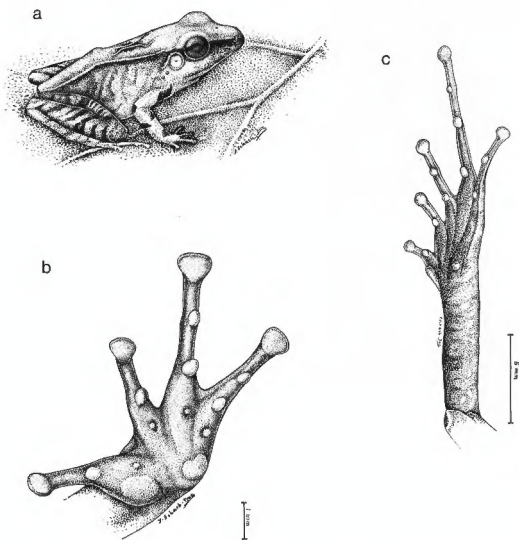


Fig. 2. — *Eleutherodactylus buccinator* sp. nov. (KU 220919, SVL = 35 mm, adult male). (a) lateral view; (b) left hand; (c) left foot.

*Other paratypes.* — KU 220919, collected at Cocha Juarez, left bank of Manu River, Zona Reservada del Manu, Madre de Dios, Peru, on April 23, 1988; MUSM 3844, collected on the uplands across Cocha Cashu, right bank of the Manu River, on February 25, 1989.

*Etymology.* — In Latin, *buccinator* is a noun meaning who plays the trumpet. The name is given to the new species in allusion to the similarity of its call to the sound produced by a honk. This name is placed in apposition to the generic name.

*Diagnosis.* — A moderate-sized frog (mean SVL of 6 males = 31.2 mm) of the *Eleutherodactylus conspicillatus* group which can be defined as follows: first finger longer than second; skin of venter smooth; tympanum prominent, annulus not concealed; large nasal bones; vomerine odontophores prominent, triangular in shape. Within this group, *E. buccinator* is characterized by a combination of: very conspicuous dorsolateral folds and an X-shaped middorsal mark; narrow head (HW/SVL = 30 to 33.7%), subacuminate snout, no labial bars (dark face mask); no tubercles in forearms; no calcar on heels; small basal webbing and lateral fringes in toes; and pink-orange marks in groin and rear shanks in life.

It can be distinguished in the field from syntopic species of the *E. conspicillatus* group by the groin coloration and the presence of prominent dorsolateral folds, only weakly defined in *E. fenestratus*, *E. peruvianus* and *E. sp.* (FLORES & RODRÍGUEZ, in preparation). Furthermore, *E. peruvianus* has cream spots behind thighs and *E. fenestratus* and the unnamed species have labial bars (dark face mask in *E. buccinator*). Other syntopic *Eleutherodactylus* species belong to the *unistrigatus* group which can be characterized by its first finger shorter than second and areolate ventral skin. None of the species in that group has conspicuous dorsolateral marks as in *E. buccinator*, except *E. toftae* which has distinctive clear spots (yellow in life) bordered by black on groin. Only *E. sulcatus* does not belong to the *E. unistrigatus* group; it presents a large head with cranial ridges, dermal dorsal ridges and digits lacking expanded discs. An additional species, *E. cruralis*, of the *E. discoidalis* group, although not reported from Cocha Cashu, is known also from Southeastern Peru; it also has the first finger longer than second and a smooth ventral skin, but the absence of digital discs (sensu LYNCH & MYERS, 1983) differentiates *E. cruralis* from *E. buccinator* and all other species of the *E. conspicillatus* group.

Among Amazonian species of the *E. conspicillatus* group, *E. buccinator* resembles *E. gutturalis* in that both species share a pink coloration on groin and rear thigh. However, *E. buccinator* lacks labial bars (present in *E. gutturalis*), has a bifid palmar tubercle (round in *E. gutturalis*), well-defined dorsolateral folds (barely visible in *E. gutturalis*), and irregular throat flecking (distinctive median gular band in *E. gutturalis*). *E. buccinator* is more similar to *E. conspicillatus*, which also shows well-defined dorsolateral folds but differs in having a wider head (HW/SVL in *E. conspicillatus* varies from 36 to 42%), cream flecks smaller than thumb pad behind thighs, an antibrachial tubercle (both absent in *E. buccinator*) and a more elongated inner metatarsal tubercle than in *E. buccinator*.

*Description of the holotype.* — Head as wide as body (head width = 9.6 mm), longer than wide (head length = 11 mm, 87.3% of head width); head narrow, head width 30% of SVL (snout-vent length = 28.2 mm). Snout subacuminate in dorsal view, moderately short, eye-nostril distance (3 mm) 75% of eye diameter (4 mm), internarial distance

2.6 mm, rounded and protruding beyond lower jaw in lateral view; canthus rostralis sharp; loreal region flat, sloping to lips; nostrils not protuberant, dorsolaterally directed. Interorbital space flat, without cranial crests, eyelid width (2.8 mm) 116 % of IOD (inter-orbital distance = 2.4 mm). Supra-tympanic fold prominent, tympanum relatively small (diameter 1.5 mm), its length one third of eye diameter; tympanum separated from eye by 1/3 its diameter. Two subconical postorbital tubercles.

Choanae oval, of moderate size, not concealed by palatal shelf of maxillary arch; vomerine odontophores slightly larger than choanae, median and posterior to choanae; odontophores elevated, triangular in outline, narrowly separated on midline by space equal to 1/2 odontophore width, each bearing five to nine teeth in transverse row; tongue cordiforme, longer than wide, posterior 2/3 free. Vocal slits and a large prominent subglottal vocal sac present.

Skin of top and sides of head, upper surfaces of limbs and anterior part of dorsum finely shagreened; that on lower back and flanks bearing scarce small non pungent tubercles, some coalescent to form the interorbital bar and a middorsal X-shaped ridge. Skin of throat and undersides of limbs smooth, that of venter finely areolated. Well-defined dorsolateral folds extending from above eyelid to groin. No supra-anal warts. Strong discoidal folds on flanks.

Forearm without tubercles; palmar tubercle bifid, 4/5 the size of oval thenar tubercle; no supernumerary subarticular tubercles on hands; subarticular tubercles simple and conical. Fingers lacking lateral fringes and bearing subdigital pads on discs; pads wider than long; discs of inner two fingers slightly wider than digit below disc, rounded, those on outer two fingers twice as wide as digit below discs and truncate apically. First finger longer than second.

Tibia length 16.1 mm (50 % of SVL); no tubercles on knee, heel or tarsus; inner edge of tarsus bearing low fold along distal two fifth. No fringe along outer edge of sole. Inner metatarsal tubercle elongate, its length 3 times its width, subconical. Outer metatarsal tubercle round, low, about one-third to one-fourth the size of inner. Single small supernumerary plantar tubercles under toes 2, 3 and 4. Subarticular tubercles longer than wide, subconical. Toes basally webbed, bearing lateral fringes. Toe discs slightly smaller, but equally shaped, than those of outer fingers except that of the first toe, rounded and as wide as digit.

In preservative, dorsum tan; supratympanic fold, canthal stripe, center of middorsal X-shaped ridge and dorsolateral folds brown; a few cream spots bordering upper lip; flanks darker, grayish, showing poorly defined vertical bars from dorso-lateral folds to venter, blotching invading underarm and part of ventral surface; throat irregularly spotted; a brown anal spot extending into more than half of the posterior surface of thighs; ventral and inner surfaces of limbs cream; posterior surfaces of thighs brown with minute light flecks, visible under magnification; external surfaces of legs bearing transverse bars and some very dark blotches on knees and heels, dark mark in elbows and an incomplete ring-like horizontal band in forearm; plantar surfaces and anal triangle dark brown.

In life, dorsal surface copper-brown, flanks darker brown-gray; groin and rear shanks dull pink-orange; venter cream, throat spotted with light brown. Iris bronze above darker brown horizontal streak, golden-brown below. Testes unpigmented.

*Variations.* — Snout-vent length of adult males ranges from 28.6 to 35.0 mm. Head is slightly longer in other adult specimens of the type series; HW varies from 80 to 84.9 % of HL (87.3 % in the holotype) in adults, the head is much longer in juveniles (HW/HL, 38 to 77 %). Otherwise, juveniles do not show any ontogenetic variation on fingers length or other proportions. Proportionally to body length, head width is greater in paratopotypes (31.1 to 33.7 % of SVL) than in the holotype (30.0 %). Shanks are also longer in paratopotypes (53.4 to 64 % of SVL) than in the holotype (50.3 % of SVL).

There is also some variation in dorsal pattern and coloration. The mid-dorsal X-shaped mark varies from only the lower part in MUSM 3844 or only the central part in MUSM 3845 and 3847, to almost two connected rhomboid marks in MUSM 3846 and 3865. Throat flecking extends more from the flanks onto the venter, especially in KU 220919 and MUSM 3844-45; MUSM 3845 presents also scattered brown spots on venter. The interorbital bar is not always well defined and is missing on three paratopotypes (KU 220919; MUSM 3844, 3847). Color of the holotype has paled when preserved, other individuals have better preserved their life colors, except for the orange-red groin marks showing as cream blotches.

*Distribution.* — The species is known from Cocha Cashu Biological Station (350 m), in the Manu National Park, Departamento de Madre de Dios, Peru. In this area, *E. buccinator* was found in both the floodplain, where the station is situated, and on the upland primary forest, across the Manu River. In June 1992, I recorded some calls of *E. buccinator* 130 km South of Cocha Cashu, at the first Andean ridge (850 m) above the mouth of the Candamo and Guacamayo rivers, approximately 13°30'17" S, 69°41'04" W, Departamento de Puno, Zona Reservada Tambopata-Candamo.

*Call.* — *Eleutherodactylus buccinator* possesses an amplitude modulated call (AM) composed of 1 to 6 notes given at an interval of about 0.76 s (93.75 notes/mn). Each note has a duration of 50 to 66 ms with 17 to 18 pulses given at a rate of 257 to 283 pulses/s (fig. 3). Spectrograms of the advertisement call, given at 24.6°C by the holotype, show a fundamental frequency of 270 Hz and two emphasized frequency bands. The first band has most of the energy concentrated in two harmonics, at 1846 and 2131 Hz. Second emphasized frequency region concentrates energy from 3290 to 3860 Hz, with 3 to 5 harmonics separated by 285 (270 to 300) Hz, the dominant frequency being approximately at 3564 Hz.

*Natural history.* — *Eleutherodactylus buccinator* is a secretive inhabitant of the understory forest of Cocha Cashu Biological Station situated on one of the meanders on the left bank of Manu river, at 350 m elevation. The pristine, 40 m tall forest is a mosaic of successional stages lying in a floodplain not older than 300 years. The understory level, which can be easily walked, is mostly composed of palms, ferns, heliconias, shrubs and young trees (see TERBORGH, 1983, and GENTRY & TERBORGH, 1990, for more detailed descriptions).

Adult males of *E. buccinator* of the type series were discovered by their call. Only MUSM 3844 was found after dark, sitting in low vegetation at 19.00 h, in the upland forest (terra firme) facing the station area, across the Manu river. It was also the only individual, out of five examined, with a full stomach containing two big prey items, an orthopteran and a chilopoda. Juveniles were found from November through late April both at night and day time, on the ground and low vegetation.

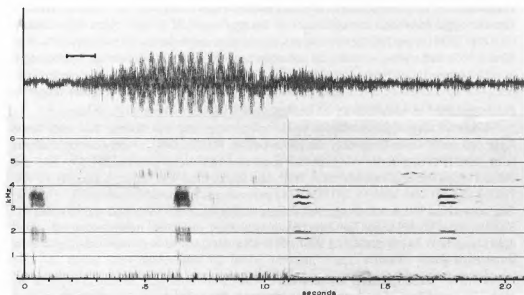


Fig. 3. — Advertisement call of *Eleutherodactylus buccinator* sp. nov.: oscillogram (above) filtered at 8 kHz, and sonagram (below). Air temperature = 24.6°C. The holotype (MUSM 3842, SVL = 28.3 mm) was calling about 50 cm above the ground, from a cavity formed by two green leaves of a small tree.

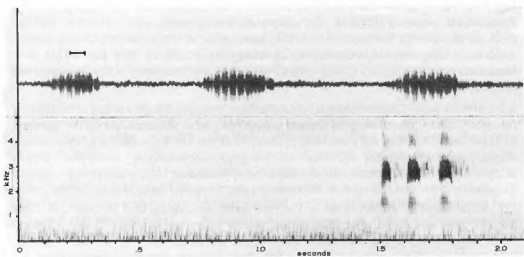


Fig. 4. — Advertisement call of *Eleutherodactylus fenestratus*: oscillogram (above) filtered at 16 kHz, and sonagram (below). Air temperature = 26°C.



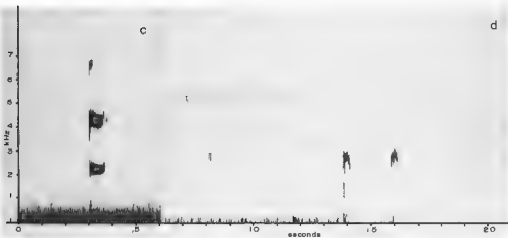
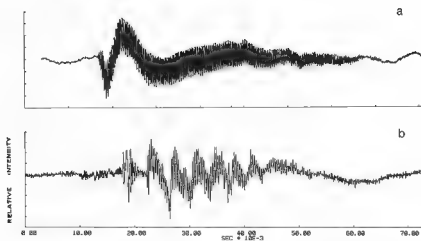


Fig. 5. — Wave form (a-b) and sonogram (c-d) of (a) and (c) *E* unnamed sp, air temperature = 23.8°C, SVL = 21.1 mm, and (b) and (d) *E. peruvianus*, air temperature = 25.8°C, SVL = 24.0 mm, oscillogram corresponds to first note.

Table I. - Call characteristics of the four syntopic species of the *Eleutherodactylus conspicillatus* group present at Cocha Cashu, Manu National Park, Madre de Dios, Peru.

Species	<i>E. fenestratus</i>	<i>E. buccinator</i>	<i>E. peruvianus</i>	<i>E. sp.</i>
Number of calls analyzed	3	6	7	4
Mean size of males (mm)	30.0	31.2	25.2	21.8
Note length (ms)	45	50	30	60
Dominant frequency (Hz)*	3100 (2896-3450)	3595 (3564-3630)	3070 (2812-3140)	4430 (4424-4500)
Fundamental frequency (Hz)*	190 (172-207)	270 (265-285)	260 (234-280)	
Number of notes per call**	1-3 (3)	1-5	1-5 (2)	1
Number of pulses per note	7-9	17-18	5-7	1
Interval between notes*	(.073-.084)	.618 (.403-.779)	.185 (.180-.380)	(2.4-2.5)

In parentheses: \* range, \*\* mean.

Males called from 30 to 160 cm above the ground ( $n = 11$ , mean =  $94 \pm 33$  cm), from uncovered perches ( $n = 3$ ), or, more frequently ( $n = 14$ ), from inside cavities formed by green leaves of small trees or by dead leaves accumulated in branches and small palms.

From 219 censuses, 40 at 06.00 h, 32 at 09.00 h, 48 at 12.00 h, 3 at 15.00 h, 64 at 18.00 h, 21 at 21.00 h and 11 at 24.00 h (1,232 hours of observations), under different weather conditions and on both seasons, *E. buccinator* has been noticed calling during 44 of the 64 censuses at dusk, between 16.30 h and 18.30 h, and only on 3 occasions at dawn (06.00 h). Although air temperature during the 64 censuses at 18 00 h varied from 16 to 28°C, *E. buccinator* only called at dusk when air temperatures were between 18 and 28°C. However, suitable temperatures for highest densities of calling males (75-100 % of maximum registered densities) ranged from 18 to 27°C.

Males of *E. buccinator* usually call in a chorus every 7 to 12 minutes. A leader starts calling and nearby frogs answer, alternating calls. While observing calling individuals at dusk, males that were kept constantly illuminated with a headlamp went on calling longer after dark, when leader and other males on the chorus had stopped, presumably because of darkness.

Table II. - Density of calling males of species of the *Eleutherodactylus conspicillatus* group per kilometer of trail censused on the floodplain of Cocha Cashu. Data come from 190 censuses at various hours of day between 1986 and 1989, under several weather conditions, dry and rainy season. H: hour of day. N: number of censuses. For each species, the first line gives the range and the second, in parentheses, the mean.

H	< 06.00 h	09.00 h	12.00 h	18.00 h	21.00 h	24.00 h
N	35	27	44	56	17	11
<i>E. fenestratus</i>						
	0-0.9	0	0	0-2.7	0-1.8	0-0.89
	(0.03)	(0)	(0)	(0.32)	(0.11)	(0.12)
<i>E. buccinator</i>						
	0-0.51	0	0	0-13.3	0	0
	(0.04)	(0)	(0)	(2.05)	(0)	(0)
<i>E. peruvianus</i>						
	0-17.8	0-9.2	0-17.9	0-79.4	3-74.5	6-31.1
	(4.33)	(0.34)	(0.62)	(9.76)	(12.59)	(12.8)
<i>E. sp.</i>						
	0-9.78	0-4.96	0-2.61	0-48	0-16.6	2.7-16.9
	(1.87)	(0.22)	(0.09)	(9.84)	(4.70)	(6.89)

The call of *E. buccinator* was easily recognized at a maximum distance of 30 m, giving a reliable strip width of 60 m for aerial census. I have then estimated a maximum density of 2 (2.2) calling males per hectare (13.3 males registered in an area of 1000 m of trail × 60 m of transect width).

*Call of syntopic species.* - Co-occurring species of the *E. conspicillatus* group are *E. fenestratus*, *E. peruvianus*, and an unnamed species of *Eleutherodactylus*, now under description (FLORES & RODRÍGUEZ, in preparation). Of the four species from Cocha Cashu, at least three revealed similar call structure: *E. buccinator*, *E. fenestratus* and *E. peruvianus* (figs. 4-5). Long range advertisement calls of all three species are composed of "chuck" amplitude modulated notes with several harmonics and pulses per note. Besides differences

in note lengths, pulses per note, time interval between notes and length of notes (see Table I), calls also differ in the range of their emphasized bands and distance between harmonics (fundamental frequencies). Calls reported here generally agree with previously described advertisement calls of *E. peruvianus* from Panguana (SCHLÜTER, 1980) and *E. fenestratus* from Manaus (ZIMMERMAN & BOGART, 1984). In addition to call differences, species also differ in peak hours of activity and microhabitat distribution. The four species have different hours of calling activity (Table II), and while *E. fenestratus* was found only in clearings and edge situations (river bank, streams or lakes), *E. buccinator*, *E. peruvianus* and the unnamed species were found only inside the forest.

### DISCUSSION

The external morphology of *Eleutherodactylus buccinator* relates it to lowland species assigned to the former *E. fitzingeri* group (LYNCH, 1976). LYNCH (1986) separated all cis-Andean species of the *E. fitzingeri* group into the *E. conspicillatus* group, based on the lateral passage of the mandibular ramus of the trigeminal nerve ("S"), relative to the *m. adductor mandibulae externus superficialis*. Although *E. buccinator* specimens were not dissected, this species shares most external characters with other species of the *E. conspicillatus* group, and is very likely related to other lowland species listed by LYNCH (1980), all having the "S" condition of the defining character; therefore, *E. buccinator* is tentatively placed in the *E. conspicillatus* group, if the group is to be valid. The monophyly of this group, currently based only on shared plesiomorphic features (LYNCH, 1986), will not be demonstrated until apomorphic features are found.

The restricted range of calling hours and the observed behaviour with respect to artificial illumination suggests a light cue and a narrow light range for calling activity in *Eleutherodactylus buccinator*. Narrow light levels have been suggested as possible cause for habitat selection and daily activity rhythms of other neotropical frogs (JEAGER & HAILMAN, 1981). Among the four species of the *E. conspicillatus* group at Cocha Cashu, differences in habitat utilization and time of activity may have arisen as a way of minimizing similarity between calls. Similar vocalizations have been suggested as a possible cause for habitat segregation and allopatric distribution of closely related species of frogs (e. g. PYBURN & LYNCH, 1981). Additionally, it has been hypothesized that particular patterns of calling activities as those observed in *E. buccinator* may ultimately be a predator-escape strategy (LYNCH & MYERS, 1983). These hypothetical light cue, sound-space partitioning and predator-escape strategy remain to be experimentally demonstrated.

### AN ARTIFICIAL KEY TO THE SPECIES OF *ELEUTHERODACTYLUS* FROM COCHA CASHU, SOUTHEASTERN PERU

For a speciose genus like *Eleutherodactylus*, updated keys are necessary to keep track of known species from well surveyed assemblages. I offer here a key for field identification

of the twelve syntopic species of Cocha Cashu. This key does not include *E. sulcatus*, the only species of *Eleutherodactylus* in the area lacking expanded discs; it cannot be confused with any other of this genus by its short digits and a very large head.

1. First finger longer than second, tympanum prominent, ventral skin smooth . . . . . 2  
    First finger shorter than second, tympanum concealed or visible, ventral skin areolate . . . . . 5
2. Prominent dorsolateral folds, no labial bars, HW/SVL < 34 %, groin reddish orange . . . . . *E. buccinator* sp. nov.  
    Dorsolateral folds barely defined or absent, with or without labial bars, HW/SVL > 34 % . . . . . 3
3. Pale spots on rear thigh . . . . . *E. peruvianus* (Melin, 1941)  
    Rear thigh uniform, labial bars . . . . . 4
4. No dark anal triangle or plantar surfaces, no dorsolateral folds . . . . .  
    . . . . . *E. fenestratus* (Steindachner, 1864)  
    Dark anal triangle and plantar surfaces, low dorsolateral ridges . . . . . *E.* unnamed sp.
5. Venter and concealed surfaces spotted or marbled . . . . . 6  
    Venter uniform or with very small flecking, concealed surfaces with or without dark marks . . . . . 7
6. Tympanum concealed, marbled venter, groin yellowish, tuberculate dorsal skin . . . . . *E. ventrimarmoratus* (Boulenger, 1912)  
    Tympanum visible, marbled venter and rear thighs, groin pink-reddish, some pustules in smooth dorsal skin . . . . . *E. dudematus* (Jiménez de la Espada, 1875)
7. Dorsum brown, reddish, cream or grayish . . . . . 8  
    Dorsum green or yellowish . . . . . 11
8. Dorsum brown or grayish, tympanum concealed . . . . . 9  
    Dorsal cream or brown, skin finely shagreened with or without warts . . . . . 10
9. Venter brown, tympanum concealed, dark and light blotches in groin, orange in life, SVL = 14.4-34.0 mm . . . . . *E. altamazonicus* Barbour & Dunn, 1921  
    Venter brown, no dark marks in groin, yellow in life, SVL < 22 mm . . . . .  
    . . . . . *E. cf. carvalhoi* Lutz, 1952
10. Large brown subocular bar, snout short, groin without dark marks, orange in life, no marbling in throat, dorsal surfaces cream, at least on snout, scattered warts . . . . . *E. ockendeni* (Boulenger, 1912)  
    Light labial stripe, snout long, yellow mark bordered with black in groin, marbling in throat, dorsum reddish brown, no warts in dorsum . . . . . *E. toftae* Duellman, 1978
11. Dull green or yellowish, tympanum visible, snout rounded in dorsal view, truncate in profile . . . . . *E. mendax* Duellman, 1978  
    Bright green, external borders white, digits white with purple, snout protruding in profile . . . . . *E.* sp.

## RÉSUMÉ

Une nouvelle espèce du groupe d'*Eleutherodactylus conspicillatus* est décrite de Cocha Cashu, 350 m, Parc National Manu, sud-est du Pérou. La nouvelle espèce, *E. buccinator*, ressemble à *E. conspicillatus* et à *E. gutturalis* et possède un chant très remarquable qui n'est émis qu'à la tombée de la nuit. Une clé d'identification des espèces d'*Eleutherodactylus* de Cocha Cashu est présentée.

## RESUMEN

Se describe una nueva especie de *Eleutherodactylus* del grupo *conspicillatus* de Cocha Cashu, 350 m, Parque Nacional del Manu, Sudeste del Perú. *E. buccinator* se parece más a *E. conspicillatus* y a *E. gutturalis* y posee un conspicuo canto que se escucha sólo al anochecer. Una clave de identificación de las especies de *Eleutherodactylus* de Cocha Cashu es presentada.

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